

# PATENT COOPERATION TREATY

From the  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

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PARK, KIM & Partner  
Jewoo Bldg. 4 th Fl.  
200, Nonhyun-Dong, Kangnam-Ku  
Seoul 135-010  
Republic of Korea

## PCT

### WRITTEN OPINION

(PCT Rule 66)

Date of mailing  
(day/month/year) 27 July 2000 (27.07.00)

Applicant's or agent's file reference

PA/KIST99346

**REPLY DUE**

within 2 months/days from  
the above date of mailing

International application No.  
PCT/KR 99/00414

International filing date (day/month/year)  
30 July 1999 (30.07.99)

Priority date (day/month/year)  
31 July 1998 (31.07.98)

International Patent Classification (IPC) or both national classification and IPC  
IPC<sup>7</sup>: A 61 K 9/107

Applicant

KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY et al.

1. This written opinion is the \_\_\_\_\_ (first, etc.) drawn by this International Preliminary Examining Authority.
2. This opinion contains indications relating to the following items:
  - I. ☒ Basis of the opinion
  - II. ☐ Priority
  - III. ☐ Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
  - IV. ☐ Lack of unity of invention
  - V. ☒ Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
  - VI. ☐ Certain documents cited
  - VII. ☐ Certain defects in the international application
  - VIII. ☐ Certain observations on the international application
3. The applicant is hereby invited to reply to this opinion.
 

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also** For an additional opportunity to submit amendments, see Rule 66.4.  
For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4bis.  
For an informal communication with the examiner, see Rule 66.6.

**If no reply is filed,** the international preliminary examination report will be established on the basis of this opinion.
4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 30 November 2000 (30.11.00).

Name and mailing address of the IPEA/AT  
Austrian Patent Office  
Kohlmarkt 8-10; A-1014 Vienna

Authorized officer

Mosser

Facsimile No. 1/53424/200

Telephone No. 1/53424/437

Form PCT/IPEA/408 (cover sheet) (July 1998)

# WRITTEN OPINION

International application No.

PCT/KR 99/00414

## I. Basis of the opinion

### 1. With regard to the elements of the international application:\*

☐ the international application as originally filed

☒ the description:

pages 1-34

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, as amended (together with any statement) under Article 19

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### 2. With regard to the language, all the elements marked above were available or furnished to this Authority in the language in which the international application was filed, unless otherwise indicated under this item.

These elements were available or furnished to this Authority in the following language \_\_\_\_\_ which is:

☐ the language of a translation furnished for the purposes of international search (under Rule 23.1(b)).

☐ the language of publication of the international application (under Rule 48.3(b)).

☐ the language of the translation furnished for the purposes of international preliminary examination (under Rule 55.2 and/or 55.3).

### 3. With regard to any nucleotide and/or amino acid sequence disclosed in the international application, the written opinion was drawn on the basis of the sequence listing:

☐ contained in the international application in printed form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ The statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ The statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

### 4. ☒ The amendments have resulted in the cancellation of:

☐ the description, pages \_\_\_\_\_

☒ the claims, Nos. 3,4,7,8,26-51,59,73,74,77,78

☐ the drawings, sheets/fig \_\_\_\_\_

### 5. ☐ This opinion has been drawn as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed, as indicated in the Supplemental Box (Rule 70.2(c)).

\* Replacement sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as „originally filed“.

# WRITTEN OPINION

International application No.  
PCT/KR 99/00414

## V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement

### 1. Statement

Novelty (N)

Claims	<u>1,2,5,6,9-25,52-58,60-72,75,76,79,80</u>	YES
Claims	_____	NO

Inventive step (IS)

Claims	<u>1,2,5,6,9-25,52-58,60-72,75,76,79,80</u>	YES
Claims	_____	NO

Industrial applicability (IA)

Claims	<u>1,2,5,6,9-25,52-57,60-72,75,76,79,80</u>	YES
Claims	<u>58</u>	NO

### 2. Citations and explanations

This written opinion is carried out on the basis of the amended claims, dated 28.02.2000. These new claims are fully supported by the description and all claims relate to one invention therefore unity is recognised for the subject-matters of all new claims.

The documents cited in the search report neither concern the release of any form of biologically active polynucleic acid or ribosome nor the compositions, emulsions, particles, complexes and methods of the present new claims are obvious from these documents.

Therefore novelty and inventive step are obvious for the subject matters of all new claims.

The new claim 58 concerns a method of treatment of the human or animal body by therapy (see PCT Rule 39.1 (iv)), therefore the subject matter of this claim is not industrial applicable. Industrial applicability of the other new claims is selfevident.

# PATENT COOPERATION TREATY

From the INTERNATIONAL SEARCHING AUTHORITY

## PCT

To:

PARK Jang Won  
PARK, KIM & PARTNER  
Jewoo Bldg. 4th Fl.  
200, Nonhyun-Dong, Kangnam-Ku  
Seoul 135-010  
Republic of Korea

NOTIFICATION OF TRANSMITTAL OF  
THE INTERNATIONAL SEARCH REPORT  
OR THE DECLARATION

(PCT Rule 44.1)

Date of mailing  
(day/month/year) 6 Dez. 1999 (06.12.99)

Applicant's or agent's file reference

PA/KIST99346

FOR FURTHER ACTION See paragraphs 1 and 4 below

International application No.  
PCT / KR 99/00414

International filing date  
(day/month/year) 30 Jul. 1999 (30.07.99)

Applicant

KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY et al.

1. ☒ The applicant is hereby notified that the international search report has been established and is transmitted herewith.  
**Filing of amendments and statement under Article 19:**  
 The applicant is entitled, if he so wishes, to amend the claims of the international application (see Rule 46):  
 When? The time limit for filing such amendments is normally two months from the date of transmittal of the international search report; however, for more details, see the notes on the accompanying sheet.  
 Where? Directly to the International Bureau of WIPO  
 34, chemin des Colombettes  
 1211 Geneva 20, Switzerland  
 Facsimile No.: (41-22) 740.14.35  
 For more detailed instructions, see the notes on the accompanying sheet.
2. ☐ The applicant is hereby notified that no international search report will be established and that the declaration under Article 17(2)(a) to that effect is transmitted herewith.
3. ☐ With regard to the protest against payment of (an) additional fee(s) under Rule 40.2, the applicant is notified that:
  - ☐ the protest together with the decision thereon has been transmitted to the International Bureau together with the applicant's request to forward the texts of both the protest and the decision thereon to the designated Offices.
  - ☐ no decision has been made yet on the protest: the applicant will be notified as soon as a decision is made.
4. Further action(s): The applicant is reminded of the following:  
 Shortly after 18 months from the priority date, the international application will be published by the International Bureau. If the applicant wishes to avoid or postpone publication, a notice of withdrawal of the international application, or of the priority claim, must reach the International Bureau as provided in Rules 90bis.1 and 90bis.3, respectively, before the completion of the technical preparations for international publication.  
 Within 19 months from the priority date, a demand for international preliminary examination must be filed if the applicant wishes to postpone the entry into the national phase until 30 months from the priority date (in some Offices even later).  
 Within 20 months from the priority date, the applicant must perform the prescribed acts for entry into the national phase before all designated Offices which have not been elected in the demand or in a later election within 19 months from the priority date or could not be elected because they are not bound by Chapter II.

Name and mailing address of the ISA/ AT  
AUSTRIAN PATENT OFFICE  
Kohlmarkt 8-10  
A-1014 Vienna  
Facsimile No. +43 / 1 / 534 24 - 200

Authorized officer  
Koch  
+43 / 1 / 534 24 - 450  
Telephone No.

# PATENT COOPERATION TREATY

## PCT

### INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>PA/KIST99346</b>	FOR FURTHER ACTION <small>see Notification of Transmittal of International Search Report (Form PCT/ISA/220) as well as, where applicable, item 5 below.</small>	
International application No. <b>PCT/KR 99/00414</b>	International filing date ( <i>day/month/year</i> ) <b>30 July 1999 (30.07.99)</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>31 July 1998 (31.07.98)</b>
Applicant <b>KOREA INSTITUTE OF SCIENCE AND TECHNOLOGY et al.</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 4 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the **language**, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ the international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. With regard to any **nucleotide and/or amino acid sequence** disclosed in the international application, the international search was carried out on the basis of the sequence listing:

☐ contained in the international application in written form.

☐ filed together with the international application in computer readable form.

☐ furnished subsequently to this Authority in written form.

☐ furnished subsequently to this Authority in computer readable form.

☐ the statement that the subsequently furnished written sequence listing does not go beyond the disclosure in the international application as filed has been furnished.

☐ the statement that the information recorded in computer readable form is identical to the written sequence listing has been furnished.

2. ☐ **Certain claims were found unsearchable** (See Box I).

3. ☒ **Unity of invention is lacking** (See Box II).

4. With regard to the **title**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the **abstract**,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box III. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. The figure of the **drawings** to be published with the abstract is Figure No.: 16

☒ as suggested by the applicant.

☐ None of the figures.

☐ because the applicant failed to suggest a figure.

☐ because this figure better characterizes the invention.

# INTERNATIONAL SEARCH REPORT

International application No.  
PCT/KR 99/00414

## A. CLASSIFICATION OF SUBJECT MATTER

IPC<sup>7</sup>: A 61 K 9/107

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC<sup>7</sup>: A 61 K 9/107

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, CAS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	WO 96/25917 A1 (BAUSCH & LOMB INCORPORATED) 29 August 1996 (29.08.96) claims 1,19,23,25,28.	1,13
X	WO 93/00160 A1 (EMORY UNIVERSITY) 07 January 1993 (07.01.93) page 18, line 38 - page 20, line 7; page 21; tables 1-4; claims 1,5,8.	3,26,35
X	EP 0490053 A1 (WELLA AKTIENGESELLSCHAFT) 17 June 1992 (17.06.92) claims 1,5,6,7.	1
X	JP 03-044314 A (NIPPON PETROCHEMICALS CO LTD) 1991-02-26 (abstract) [online] [retrieved on 1991-11-08]. Retrieved from EPO PAJ Database.	1
X	JP 06-219940 A (SHISEIDO CO. LTD.) 1994-08-09 (abstract) [online] [retrieved on 1999-11-08]. Retrieved from EPO PAJ Database	1,3,7,52

☐ Further documents are listed in the continuation of Box C.

☒ See patent family annex.

### \* Special categories of cited documents:

„A“ document defining the general state of the art which is not considered to be of particular relevance

„E“ earlier application or patent but published on or after the international filing date

„L“ document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)

„O“ document referring to an oral disclosure, use, exhibition or other means

„P“ document published prior to the international filing date but later than the priority date claimed

„T“ later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

„X“ document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

„Y“ document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

„&“ document member of the same patent family

Date of the actual completion of the international search

08 November 1999 (08.11.99)

Date of mailing of the international search report

06 December 1999 (06.12.99)

Name and mailing address of the ISA/AT  
Austrian Patent Office  
Kohlmarkt 8-10; A-1014 Vienna  
Facsimile No. 1/53424/200

Authorized officer

Mosser

Telephone No. 1/53424/437

**Box I** Observations where certain claims were found unsearchable (Continuation of item 1 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☒ Claim No.: 58  
because they relate to subject matter not required to be searched by this Authority, namely:  
Remark: Although claim 58 concerns the treatment of the human or animal body by therapy (see PCT Rule 39.1 (iv) the search was carried out and based on the alleged effects.
2. ☐ Claims Nos.:  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box II** Observations where unity of invention is lacking (Continuation of item 2 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

1. claims 1, 3, 5, 7, 9-17, 26-38, 52-61, 71, 73, 75 and 77 concern lipid emulsions comprising non-triglyceride oil.

2. claims 2, 4, 6, 8, 18-25, 39-51, 62-70, 72, 74, 76 and 78 concern solid lipid nanoparticles comprising fat of triglycerides.

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims: it is covered by claims Nos.:  
1, 3, 5, 7, 9-17, 26-38, 52-61, 71, 73, 75, 77.

Remark on Protest

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

## INTERNATIONAL SEARCH REPORT

Information on patent family members

International application No.

PCT/KR 99/00414

Im Recherchenbericht angeführtes Patentedokument Patent document cited in search report Document de brevet cité dans le rapport de recherche	Datum der Veröffentlichung Publication date Date de publication	Mitglied(er) der Patentfamilie Patent family member(s) Membre(s) de la famille de brevets	Datum der Veröffentlichung Publication date Date de publication
WD A1 9625917	29-08-1996	AU A1 48683/96 CA AA 2213517 EP A1 610852 US A 5759557 US A 5759558	11-09-1996 29-08-1996 10-12-1997 02-06-1998 02-06-1998
WD A1 9300160	07-01-1993	AT E 165749 AU A1 23168/92 CA AA 2112356 CN A 1073889 CN A 1096224 CN B 1042198 DE CO 69225404 DE T2 69225404 EP A1 591452 EP A4 591452 EP B1 591452 ES T3 2116340 HK A1 1010450 IE B 67066 IL A0 102317 IL A0 107262 JP T2 6508555 US A 5885590	15-05-1998 26-01-1993 07-01-1993 07-07-1993 14-12-1994 24-02-1999 10-06-1998 17-12-1998 13-04-1994 20-07-1994 06-05-1998 16-07-1998 17-06-1999 21-02-1996 14-01-1993 25-01-1994 29-09-1994 23-03-1999
EE A 490053		keine - none - rien	
JP A2 3044314	26-02-1991	keine - none - rien	
JP A2 6219940	09-08-1994	keine - none - rien	

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